

portion of the sidewalls of the trench to form a first electrode. ...”

Park does not disclose or suggest a first conductive material formed in the trench connecting to the buried plate through a bottom portion and a lower portion of the sidewalls of the trench to form a first electrode. Indeed, Park discloses the first conductive layer 26' being in contact with diffusion region only at the bottom portion of the trench, but not the sidewalls of the trench. Thus, the current invention advantageously provides an increase in the contact area between the buried plate and the first conductive material. Therefore, Claim 1 is believed to be patentably distinct and patentable over Park.

Claims 2- 4 and 6 depend from claim 1 and therefore the dependent claims are allowable for at least the same reasons as claim 1. Accordingly, the withdrawal of the claim rejections under 35 U.S.C. § 102 is respectfully requested.

Claim Rejections- 35 U.S.C. § 103(a)

With respect to claim 5, claim 5 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 5,677,225) as applied to claim 1 above, and further in view of Chang (US 6,077,739).

To establish a prima facie case of obviousness, at the very minimum, the prior art references must teach or suggest all the claim limitations. (see, e.g., MPEP 2141, 2143, 2143.03). It is respectfully submitted that the combination of Park and Chang is legally deficient to establish a prima facie case of obviousness under 35 U.S.C. § 103 to support the rejection of claims 5. For instance, neither Park or Chang, singularly or in combination, teach or suggest “...a first conductive material formed in the trench connecting to the buried plate through a bottom

portion and a lower portion of the sidewalls of the trench to form a first electrode....” Therefore, taken as a whole, the combination of Park and Chang does not disclose the making of a first electrode connecting a buried plate through the bottom and lower portion of the sidewalls of the trench, as essentially claimed in claim 5. Thus claim 5, is believed to be non-obvious and patentable over the combination of Park and Chang.

Accordingly, the withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable action is respectfully requested.

Respectfully submitted,

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CLAIM AMENDMENTS (Marked-up Version)

1. (Amended) A semiconductor device, comprising
- a trench formed in a substrate[:];
 - a diffusion region surrounding the trench to form a buried plate;
 - a first conductive material formed in the trench connecting to the buried plate through a
bottom portion and a lower portion of the sidewalls of the trench to form a first electrode;
 - a second conductive material disposed in the trench to form a second electrode; and
 - a node dielectric layer formed between the first electrode and the second electrode.